

IN THE CLAIMS:

Please substitute the following claims for the same-numbered claims in the application:

1. (Currently Amended) A method of controlling a manufacturing system, said method comprising:
 - providing at least one processing tool and at least one set of auxiliary equipment;
 - providing a first prioritized list of the auxiliary equipment to load on said at least one processing tool based on a list of said auxiliary equipment absent from said at least one processing tool;
 - providing a second prioritized list of said auxiliary equipment to remove from said at least one processing tool;
 - supplying a plurality of workpieces to be processed on said processing tool; and
 - determining, from characteristics associated with said processing tool and said plurality of workpieces, an order of arrival of said auxiliary equipment to arrive at said processing tool.
2. (Original) The method of claim 1, wherein in said providing, said processing tool comprises a photolithographic system.
3. (Original) The method of claim 2, wherein in said providing, said auxiliary equipment comprises a reticle.

4. (Original) The method of claim 1, further comprising modeling future events related to said processing tool based on work-in-process profiles generated from an iteration of said method.
5. (Original) The method of claim 1, wherein in said supplying, said plurality of workpieces comprise semiconductor wafers.
6. (Original) The method of claim 1, wherein said characteristics associated with said plurality of workpieces comprise work lot priorities, processing times, auxiliary equipment handling system bandwidth, lot priorities of forecasted lots, and pod availability.
7. (Original) The method of claim 1, wherein said determining comprises ranking said auxiliary equipment in terms of expected arrival times to said processing tool.
8. (Original) The method of claim 1, further comprising modeling future events related to said processing tool based on work-in-process projections.
9. (Currently Amended) A method of controlling a manufacturing system, said method comprising:
 - providing a plurality of workpieces to be processed on a processing tool, said plurality of workpieces located at processing stations prior to said processing tool;
 - providing a first prioritized list of auxiliary equipment to load on said processing tool

based on a list of said auxiliary equipment absent from said at least one processing tool:

providing a second prioritized list of said auxiliary equipment to remove from said processing tool;

determining auxiliary equipment allocation needs for said processing tool based on characteristics associated with said plurality of workpieces prior to said workpieces arriving at said processing tool; and

sending auxiliary equipment to said processing tool based on said allocation needs prior to said workpieces arriving at said processing tool.

10. (Original) The method of claim 9, wherein in said providing, said processing tool comprises a photolithographic system.

11. (Original) The method of claim 10, wherein in said determining, said auxiliary equipment comprises a reticle.

12. (Original) The method of claim 9, wherein in said providing, said plurality of workpieces comprise semiconductor wafers.

13. (Original) The method of claim 9, wherein said characteristics associated with said plurality of workpieces comprise work lot priorities, processing times, auxiliary equipment handling system bandwidth, lot priorities of forecasted lots, and pod availability.

14. (Original) The method of claim 9, wherein said determining comprises ranking said workpieces in terms of expected arrival times to said processing tool.
15. (Original) The method of claim 9, further comprising modeling future events related to said processing tool based on work-in-process projections.
16. (Currently Amended) A system for controlling a manufacturing process comprising:
a processing tool configured for processing a plurality of workpieces;
a processing station comprising said plurality of workpieces, wherein a location of said processing station precedes a location of said processing tool;
an analyzer configured for determining, from characteristics associated with said plurality of workpieces, an order of arrival of a first of said workpieces to arrive at said processing tool;
and
a controller configured for providing auxiliary equipment corresponding to the first workpieces to said processing tool prior to the arrival of said first workpieces to said processing tool[.].
wherein said controller is adapted to (i) provide a first prioritized list of the auxiliary equipment to load on said at least one processing tool based on a list of said auxiliary equipment absent from said at least one processing tool; and (ii) provide a second prioritized list of said auxiliary equipment to remove from said at least one processing tool.

17. (Original) The system of claim 16, wherein said processing tool comprises a photolithographic system.
18. (Original) The system of claim 17, wherein said auxiliary equipment comprises a reticle.
19. (Original) The system of claim 16, wherein said plurality of workpieces comprise semiconductor wafers.
20. (Original) The system of claim 16, wherein said characteristics associated with said plurality of workpieces comprise work lot priorities, processing times, auxiliary equipment handling system bandwidth, lot priorities of forecasted lots, and pod availability.
21. (Original) The system of claim 16, wherein said analyzer is configured for ranking said workpieces in terms of expected arrival times to said processing tool.
22. (Original) The system of claim 16, further comprising a modeling generator configured for modeling future events related to said processing tool based on work-in-process projections generated from said analyzer.
23. (Currently Amended) A program storage device readable by computer, tangibly embodying a program of instructions executable by said computer to perform a method of controlling a manufacturing system, said method comprising:

providing at least one processing tool and auxiliary equipment;

providing a first prioritized list of the auxiliary equipment to load on said at least one processing tool based on a list of said auxiliary equipment absent from said at least one processing tool;

providing a second prioritized list of said auxiliary equipment to remove from said at least one processing tool;

supplying a plurality of workpieces to be processed on said processing tool; and

determining, from characteristics associated with said processing tool and said plurality of workpieces, an order of arrival of said auxiliary equipment to arrive at said processing tool.

24. (Original) The program storage device of claim 23, wherein in said providing, said processing tool comprises a photolithographic system.

25. (Original) The program storage device of claim 24, wherein in said providing, said auxiliary equipment comprises a reticle.

26. (Original) The program storage device of claim 23, wherein in said supplying, said plurality of workpieces comprise semiconductor wafers

27. (Original) The program storage device of claim 23, wherein said characteristics associated with said plurality of workpieces comprise work lot priorities, processing times, auxiliary equipment handling system bandwidth, lot priorities of forecasted lots, and pod

availability.

28. (Original) The program storage device of claim 23, wherein said determining comprises ranking said workpieces in terms of expected arrival times to said processing tool.

29. (Original) The program storage device of claim 23, wherein said method further comprises modeling future events related to said processing tool based on work-in-process projections.

30-37. (Cancelled).

38. (New) The method of claim 1, wherein the process of providing said first prioritized list comprises:

- creating a dispatchable workpiece lot list;

- creating a work-in-process (WIP) projection report;

- prioritizing said WIP projection report;

- merging said dispatchable workpiece lot list and said WIP projection report into a single list;

- removing said auxiliary equipment currently allocated to said at least one processing tool from said single list;

- removing inhibited and unavailable auxiliary equipment from said single list; and

joining corresponding wafer lot information of auxiliary equipment associated with workpiece lots in either said dispatchable wafer lot list or said WIP projection report to said single list.

39. (New) The method of claim 1, wherein the process of providing said second prioritized list comprises:

- creating a removal list of auxiliary equipment that is currently on said processing tool;
- removing, from said removal list, auxiliary equipment associated with workpiece lots in a work-in-process (WIP) projection report;
- removing, from said removal list, said auxiliary equipment that are on said WIP projection report;
- removing, from said removal list, said auxiliary equipment that are on a dispatchable workpiece lot list; and
- prioritizing said removal list based on the last usage of said auxiliary equipment and on workpiece lots on hold.

40. (New) The method of claim 9, wherein the process of providing said first prioritized list comprises:

- creating a dispatchable workpiece lot list;
- creating a work-in-process (WIP) projection report;
- prioritizing said WIP projection report;

merging said dispatchable workpiece lot list and said WIP projection report into a single list;

removing said auxiliary equipment currently allocated to said at least one processing tool from said single list;

removing inhibited and unavailable auxiliary equipment from said single list; and

joining corresponding wafer lot information of auxiliary equipment associated with workpiece lots in either said dispatchable wafer lot list or said WIP projection report to said single list.

41. (New) The method of claim 9, wherein the process of providing said second prioritized list comprises:

creating a removal list of auxiliary equipment that is currently on said processing tool;

removing, from said removal list, auxiliary equipment associated with workpiece lots in a work-in-process (WIP) projection report;

removing, from said removal list, said auxiliary equipment that are on said WIP projection report;

removing, from said removal list, said auxiliary equipment that are on a dispatchable workpiece lot list; and

prioritizing said removal list based on the last usage of said auxiliary equipment and on workpiece lots on hold.

42. (New) The system of claim 16, wherein said first prioritized list is created by:
- creating a dispatchable workpiece lot list;
 - creating a work-in-process (WIP) projection report;
 - prioritizing said WIP projection report;
 - merging said dispatchable workpiece lot list and said WIP projection report into a single list;
 - removing said auxiliary equipment currently allocated to said at least one processing tool from said single list;
 - removing inhibited and unavailable auxiliary equipment from said single list; and
 - joining corresponding wafer lot information of auxiliary equipment associated with workpiece lots in either said dispatchable wafer lot list or said WIP projection report to said single list.
43. (New) The system of claim 16, wherein said first prioritized list is created by:
- creating a removal list of auxiliary equipment that is currently on said processing tool;
 - removing, from said removal list, auxiliary equipment associated with workpiece lots in a work-in-process (WIP) projection report;
 - removing, from said removal list, said auxiliary equipment that are on said WIP projection report;
 - removing, from said removal list, said auxiliary equipment that are on a dispatchable workpiece lot list; and

prioritizing said removal list based on the last usage of said auxiliary equipment and on workpiece lots on hold.

44. (New) The program storage device of claim 23, wherein in said method, the process of providing said first prioritized list comprises:

creating a dispatchable workpiece lot list;

creating a work-in-process (WIP) projection report;

prioritizing said WIP projection report;

merging said dispatchable workpiece lot list and said WIP projection report into a single list;

removing said auxiliary equipment currently allocated to said at least one processing tool from said single list;

removing inhibited and unavailable auxiliary equipment from said single list; and

joining corresponding wafer lot information of auxiliary equipment associated with workpiece lots in either said dispatchable wafer lot list or said WIP projection report to said single list.

45. (New) The program storage device of claim 23, wherein in said method, the process of providing said second prioritized list comprises:

creating a removal list of auxiliary equipment that is currently on said processing tool;

removing, from said removal list, auxiliary equipment associated with workpiece lots in a work-in-process (WIP) projection report;

removing, from said removal list, said auxiliary equipment that are on said WIP
projection report;

removing, from said removal list, said auxiliary equipment that are on a dispatchable
workpiece lot list; and

prioritizing said removal list based on the last usage of said auxiliary equipment and on
workpiece lots on hold.